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# Forest Service NEWS



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IMMEDIATE RELEASE

## FISH ENHANCEMENT PROGRAM

Historically, the effects of man's activities and natural events have combined to reduce spawning and rearing habitat for steelhead and salmon. These anadromous fish instinctively return to their birth place to spawn and perpetuate their species. Young salmon then migrate to the ocean to mature.

When their fresh water habitat is impacted, production is reduced. A reduced fish population affects both sport and commercial fishing adversely.

The Forest Service recognizes the need for direct habitat improvement on coastal streams and Columbia River tributaries. It's taking action to attack the root cause of declining fish numbers from within National Forests by improving and enlarging spawning and rearing habitat for anadromous fish.

These steps are critical if the once abundant runs of anadromous fish are to reach their historic population levels in some streams.

Natural waterfalls are obvious barriers to fish migration, but road construction and logging also create obstacles. Fish ladders, baffles, and sometimes blasting can modify obstructed stream channels, easing the upward migration of salmon and steelhead as well as creating entirely new spawning habitat.

Several years ago, many resource managers were clearing streams of logs and other debris on the assumption that this would improve fish passage. But fish

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biologists have since learned that logs and boulders can be used to direct water flow, creating habitat that allows for gravel accumulation and rearing pools.

Last year, the Forest Service spent nearly \$2 million in the Pacific Northwest Region on 11 of its 19 National Forests for fish habitat improvement programs.

About \$800,000 came from appropriated funds while another \$500,000 came from Knutson-Vandenberg funds (K-V). K-V funds are derived from timber sale receipts and are used to improve a sale area after timber harvest. In addition, the Bonneville Power Administration provided another \$450,000.

One such project on the Gold Beach Ranger District, Siskiyou National Forest, involved placing log weirs on two tributaries of the Rogue River and blasting a fish ladder around a falls. Pete Brost, District Ranger, said the fish ladder will add up to seven miles of new habitat, and Ray Hartlerode, Oregon Department of Fish and Wildlife, estimated that the project will increase fish production in the treated area by 100 percent.

On the nearby Powers Ranger District, District Biologist Linda Mullens was in charge of an important project on tributaries of the Coquille River. Forty-five fish structures were installed on Rock Creek, principally log weirs and boulders, but dynamite was used to create four rearing pools.

Culvert clearings were also completed on several Coquille tributaries and debris jams were removed on several streams, creating three-quarters of a mile of new habitat above each jam. Mullens said fish production will increase but maintenance must be continued next spring.

Del Skeesick, fisheries biologist on the Willamette National Forest,

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reports that a comprehensive habitat improvement program was carried out on the Lowell Ranger District, one that involved two federal agencies, the State of Oregon, two timber companies, and local volunteers. Skeesick said the program principally involved stream modification through log and rock placement, sometimes widening, sometimes narrowing the stream, and adding fish ladders where needed.

"The nearby McKenzie Ranger District," he said, "is preparing a similar program for next spring."

Workers on the Mt. Baker-Snoqualmie National Forest this year completed new projects on six Puget Sound rivers. Jim Doyle, fisheries biologist, described the program and its results to members of the American Fishery Society at Sun Valley, Idaho. Doyle told the Society that 900 structures of various kinds have been installed over the past 4 years, and that 75 percent are accomplishing program objectives. He said that more salmon juveniles are overwintering in the improved areas and that fish are using the areas more during low water. He concludes that salmon spawning habitat has been doubled in the Puget Sound area as a result of their efforts.

Biologists on the Soleduck Ranger District, Olympic National Forest, began a fish habitat enhancement effort in 1978 in conjunction with the Quilleute Indian Tribe, the State of Washington and a sportsmen group. The removal of log jams on the Soleduck river added four miles of new habitat.

The Quilleute Indians provided most of the early funding, but by 1985, additional Forest Service funding became available and work was extended to log weirs, rock berms and modification of one waterfall.

What did the public get for its \$2 million last year? Gordon Haugen, Forest Service Regional fisheries program manager, said that no precise dollar

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benefits can yet be tallied because anadromous fish remain in the ocean for up to 4 years before returning to spawn. "But it is certain that sport and commercial fisheries contribute vast sums to the Pacific Northwest economy," Haugen said. "Their return migration will determine long-term benefits more accurately." He pointed out that in 1982 (latest figures available) fish production directly attributable to habitat in National Forests in Oregon and Washington produced 7.4 million pounds of anadromous fish, valued at \$13.5 million.

Haugen explained that apparent results of recent habitat and escapement development projects are encouraging. "Attaining the full potential will depend on continued commitment and availability of funds," Haugen continued. "A five-year program has been developed by the Forest Service that calls for an investment in the Pacific Northwest Region of about \$3 million annually." Haugen estimates that if the program is completed as planned, an additional half-million pounds of anadromous fish production can be attributable to habitat within National Forests in Oregon and Washington.

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ANADROMOUS FISH - [Side-bar]

On a fall afternoon a male Chinook salmon finds the small creek where he was born and also finds a mate. Together they dig a depression in the gravel.

The female lays her eggs and the male swims over them, fertilizing them with his sperm. They cover the eggs lightly for protection and then they die, thus ending their lives, which began at this place.

The best efforts of man have failed to learn how these salmon picked this particular stream with unerring accuracy, overcoming seemingly impossible obstacles on the way. But the process repeats itself year after year.

Next spring tiny pollywog-like creatures emerge from the eggs and struggle for life in an unfriendly environment. During their first year they grow and gain strength to battle with nature prior to their migration to the ocean.

Millions never survive the journey but those that do, remain in the ocean to feed and grow. But when the right time arrives, they seek the correct coastal stream and then a tributary and then another tributary until they reach their birthplace. And the cycle begins anew.

The steelhead trout, also a salmonid fish, follows the same migration pattern as the salmon but does not die after spawning. Steelhead return to the ocean to repeat the upward migration several times during their life cycle.

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